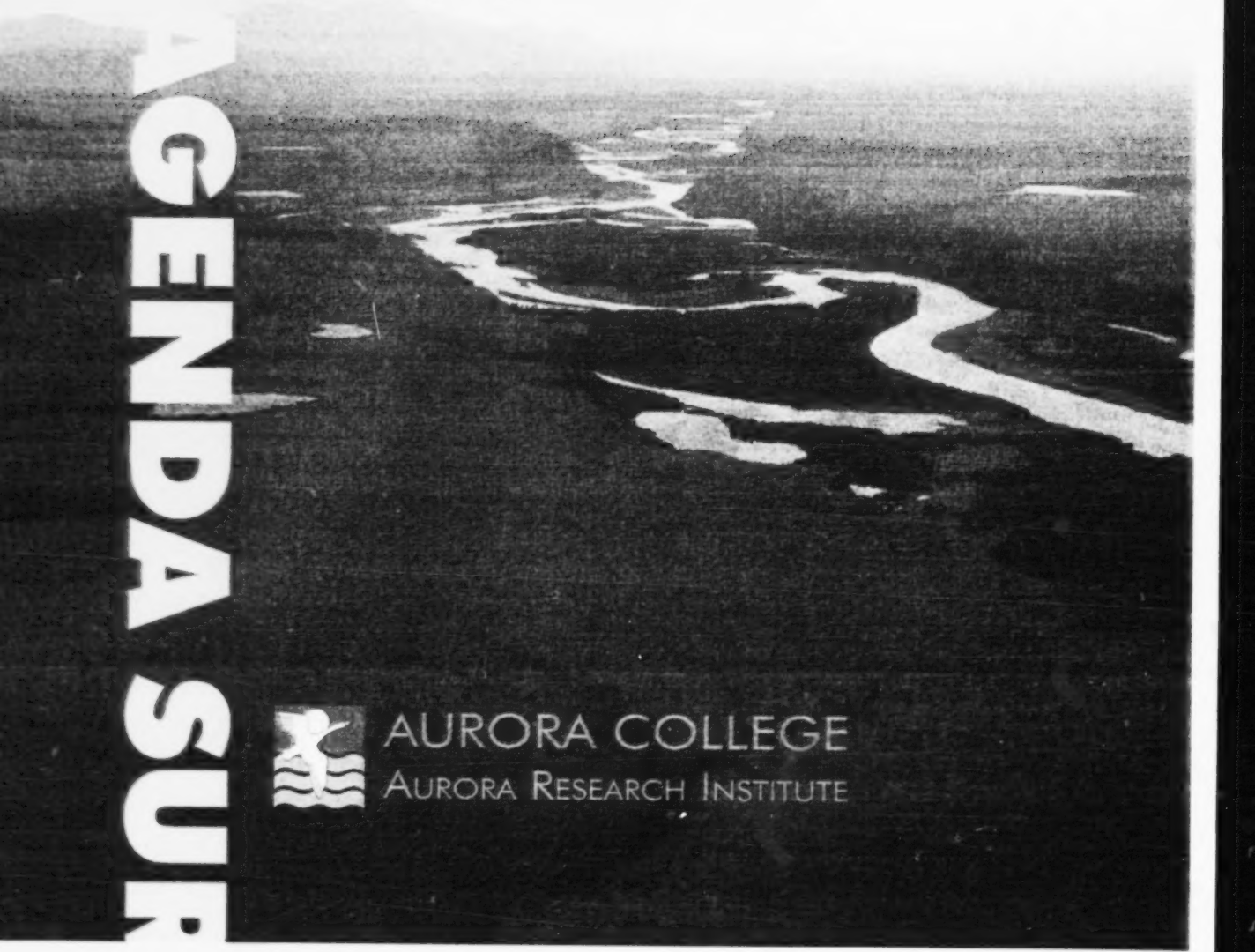
NWT Research Agenda Survey 2001



AURORA COLLEGE
AURORA RESEARCH INSTITUTE

2008-05816/

We would like to extend a sincere Thank You to all of the individuals and organizations who contributed their time and effort to completing the 2001 NWT Research Agenda Questionnaire.

We invite you to submit your comments, thoughts, and suggestions on the NWT Research Agenda Survey at any time to:

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SUMMARY

The NWT Research Agenda Survey 2001 was developed in order to determine the research priorities of the different groups involved in research in the Northwest Territories (NWT), to look at the relationship and communication between Researchers and Non-Researchers in the NWT, and to assess the role of the Aurora Research Institute (ARI) in meeting the needs of people in the NWT.

The results of the NWT Research Agenda Survey 2001 are based on the responses received from a questionnaire sent out to government departments (federal, territorial, and municipal), aboriginal organizations, industry, and special interest groups. Two versions of the questionnaire were used. The first version was targeted to organizations in the NWT that do not conduct research (Non-Researchers). This version of the questionnaire was filled out by 68 different organizations. The second version of the survey was targeted to organizations that conduct research in the NWT (Researchers). This version of the survey was filled out by 89 different organizations: 41 of these organizations were based in the NWT, while the other 47 were from other regions of Canada (with some international respondents).

This survey found that the top research priorities for groups not conducting research are *Health and Well-Being*, *Social Issues*, and *Education*. The top research priorities for groups that conduct research in the NWT are *Land Resources*, *Wildlife Management*, and *Health and Well-Being*.

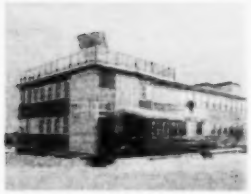
Survey respondents' priorities for research were found to not be reflected in the actual amounts of research conducted in the NWT (according to research licenses issued in the NWT).

Communication between Researchers and Non-Researchers was found to generally be good, although Researchers tended to believe they were being more effective at communication than the Non-Researchers thought they were. For both Researchers and Non-Researchers, the preferred method of both delivering and receiving research results was the use of *Plain Language Reports*. Researchers preferred *Workshops* and wanted a *Better Understanding of the Co-management Process* in order to improve the communication of NWT research needs to researchers.

The development and distribution of a *Research Newsletter* and *Plain Language Reports* were the top choices of both Researchers and Non-Researchers for services that the Aurora Research Institute could provide.

Recommendations to follow up on the results of this survey include holding a series of focus groups in communities across the NWT in order to get feedback on, and verify the results of, this survey; building a comprehensive list of the various "Northern Research Agendas" that have been developed for the NWT; and hosting a conference that brings together NWT residents, Northern-based researchers, Southern-based researchers, university groups and funding bodies in order to cooperatively look at building a thorough and implementable research strategy for the NWT.

BACKGROUND



A division of Aurora College, the Aurora Research Institute is dedicated to excellence, leadership and innovation in northern education and research. As such, the Research Institute has been involved in research and related activities to improve the quality of life in the Northwest Territories (NWT) through the application of scientific, technological and indigenous knowledge to solve northern problems and to advance social and economic goals. The Aurora Research Institute is continuing many of the activities of it's predecessor, the Science Institute of the Northwest Territories, when the Science Institute merged with the College in 1994.

THE AURORA RESEARCH INSTITUTE'S MANDATE

The Aurora Research Institute (ARI) is responsible for:

1) Licensing and coordinating research in accordance with the NWT Scientists Act. This includes work in the physical, social and biological sciences and in traditional knowledge;

2) Promoting communication between researchers and the people of the communities in which they work;

3) Promoting public awareness of the importance of science, technology and traditional knowledge;

4) Fostering a scientific community within the NWT which recognizes and uses the traditional knowledge of northern aboriginal people;

5) Making scientific knowledge available to the people of the NWT; and

6) Supporting or conducting research that contributes to the social, cultural and economic prosperity of the people of the NWT.

Currently, the ARI works to build a northern knowledge base by coordinating community based research activities, promoting technological development, documenting research undertaken in the North, and supporting and facilitating research. The ARI works to connect the scientific community with the communities of the NWT by promoting and supporting studies that improve the understanding of the natural resources and traditional knowledge and cultures of the NWT. In doing so, the ARI has taken a comprehensive approach to determining the research needs and interests of the communities within all regions of the NWT and all disciplines of study. The programs at the ARI have historically been, and will continue to be, developed and implemented through partnerships with community agencies in the North.

THE DEVELOPMENT OF A NWT RESEARCH AGENDA

A Northern Research Agenda was first initiated in 1995 as one of the strategies of the Aurora College five-year Corporate Plan. This document (*A Blueprint for the Future: Aurora College Corporate Plan 1995-2000)* outlined the background to this strategy and intended actions:

"Research in the NWT is a critical component of knowledge building for the

people of the territory. At the same time, it is also significant to the national and global knowledge base. Scientific research is typically driven by three main forces: scientific inquiry, the availability of research funds, and the needs and interests of research institutions.

It is often difficult to gauge the value of research to both the scientific community and the world as a whole. On the other hand, communities of the North express concern that research is undertaken to meet the needs of the academics while research about community issues is critically needed.

To try and address these issues, a northern research agenda should be developed and implemented. This agenda should...address those issues that are most critical to Northerners. It should be specific enough to address the immediate information needs of Northerners and yet be sufficiently broad to advance the potential of pure scientific inquiry in the North. This agenda can form the basis of a research and development strategy for the Northwest Territories...

In 1995, the Aurora College identified the establishment of a Northern Research Agenda as one of the Key Strategies to fulfill the College's vision.

Actions:

- Establish an annual agenda of research that is required by Northerners by consulting community groups and agencies;
- Increase accessibility [to research] through information sharing and database development;
- Expand research support programs and identify dedicated funds for priority research;
- Examine resources and determine the research that the institute can manage directly and those that require external support;
- Establish formal and informal funding and research partnerships with appropriate agencies to meet the needs of researchers and communities;
- Promote the northern research agenda through communications with other agencies and students;
- Lead in the development of technologies in the Northwest Territories;
- Establish priorities and capabilities for in-house research;
- Promote participatory, action research, where possible;
- Develop the College as a Centre for Excellence in community based, northern research."

To begin the development of a research agenda, in 1995 the Aurora Research Institute submitted a Research Needs Assessment questionnaire to aboriginal organizations, educational institutions, government departments, health agencies, municipalities and nongovernmental organizations throughout the NWT. This survey of research needs and priorities became the basis for the first edition of the Northern Research Agenda (now the NWT Research Agenda). This was an important document for the ARI, aboriginal organizations, government departments and the private sector as it provided written evidence of the research needs and concerns of Northwest Territories residents. The original document has served to guide the direction and initiatives of our organization and researchers planning to conduct studies in the NWT.

A number of important changes have taken place in the NWT since publication of the original Northern Research Agenda. An explosion of industrial, resource-based development, the settlement and working out of land claims, and the restructuring of key government departments are just a few of the high profile issues changing the face of the Northwest Territories. As just one example of the tremendous pace of change, over the last two years (2000 and 2001) the Northwest Territories economic growth rate - at 20.8% - was over 17 times the Canadian national average (www.stats.gov.nt.ca).

For the years 2000 and 2001, the economic growth rate in the Northwest Territories was over 17 times the Canadian national average.

These changes have undoubtedly influenced the social, economic, and environmental fabric of the NWT. They may have also produced new strategic directions and research priorities. If the NWT Research Agenda is to remain a dynamic initiative of the ARI it must keep pace with the unfolding direction of the research environment of the NWT.

The 2001 edition of the NWT Research Agenda is a response to these needs. There have been a number of changes and additions to the original questionnaire format to more clearly reflect the needs and priorities of the residents of the NWT. The 2001 survey distribution list was expanded to include researchers and organizations in the South who do research in the NWT. Questions were included to look in more detail at some of the issues raised in the 1995 survey. To facilitate participation, respondents were given a variety of options for returning the questionnaire including electronic submission using the ARI web site.

Objectives

The 2001 edition of the NWT Research Agenda has four main objectives:

1. To identify research topics of interest to the people of the Northwest Territories and to identify issues needing to be addressed considering the rapid pace of change in Northern communities.

2. To establish whether the research priorities of NWT residents and subsequent direction of the Aurora Research Institute has changed since the 1995 survey and to assess whether modifications are necessary to assure that issues anticipated in the next 5 years are planned for.

3. To address how well the research needs of Northerners are communicated to Southern research institutions and funding agencies and where improvements can be made.

4. To assess what the mandate and role of the ARI is in meeting the needs of its clients and where improvements can be made.

METHODOLOGY

The 2001 version of the NWT Research Agenda involved a survey of the opinions of a selected non-random sample of organizations based in the NWT as well as organizations based in other areas but who conduct research in the NWT. Both research organizations and organizations that make use of research were included.

Design and Sampling

The 2001 NWT Research Agenda questionnaire was designed to serve as a follow-up to the 1995 NWT Research Agenda survey, as well as to address several broad issues surrounding research activities in the NWT. The major areas addressed included:

- Priority of research needs
- Communication between researchers and non-researchers
- The role of ARI

The responses from the 1995 Research Agenda Survey (available on-line at www.nwtresearch.com) became a baseline for comparison to responses from the 2001 survey.

In order to compare answers from the 2001 survey to the 1995 survey, the same basic questions and survey methodology were used, with a few important modifications:

- Sampling methodology for the 2001 survey was adapted to ensure that views and information collected in the survey are representative of all groups who have an interest in research in the NWT. In an effort to increase the number of respondents, an expanded contact list of organizations and researchers was developed. In addition to expanding the number of organizations in the NWT surveyed, the 2001 surveys were also sent to national and international researchers and research organizations who are involved or have been involved in research activities in the NWT.

- In 2001 two versions of the questionnaire were used. One version was targeted to organizations, agencies and government departments conducting research and actively involved in research programs in the NWT (referred to in this document as ***Researchers***). The second version of the survey was targeted to organizations, agencies, and government departments not conducting research in the NWT but who have an interest in research conducted in particular subject areas in their community or region (referred to in this document as ***Non-Researchers***). All of the Non-Researchers surveyed were based in the NWT. Respondents were asked to classify their organization as either conducting or not conducting research, and then fill out the appropriate questionnaire based on that self-defined characteristic.

- For questions requiring respondents to pick from a list of choices, some of the lists were lengthened in the 2001 survey. This was done to better reflect changes in the NWT, and to incorporate comments from the 1995 results.

- In 2001, both print and electronic versions of the questionnaire were developed and distributed.

The 2001 questionnaire was distributed between June and September of 2001. Based on responses received, in October a small number of organizations were re-contacted by phone in an attempt to increase survey participation and to ensure that the responses reflected all regions of the NWT.

The survey was comprised of three principle types of questions: yes/no questions, scaled (multiple-choice) questions and 'pick-three-responses' (questions that invited respondents to choose from a pre-defined list). Other choices and comments initiated by respondents were invited for all scaled and pick-list questions.

An MS Access database was designed for the survey and responses were entered into it. Results were collated, analyzed and reported. In most cases, results in this document are reported using percentages.

157 different organizations filled out the NWT Research Agenda Survey 2001, 109 of which were from the North.

Table 1
Survey Respondents

Survey year:	1995	2001
# of surveys sent	224	424
Responses received	109 (49%)	157 (37%)
Respondents from the North	109 (100%)	109 (69%)
Respondents from the South	0	49 (31%)
Respondents conducting research	N/A	89 (57%)
Respondents not conducting research	N/A	68 (43%)

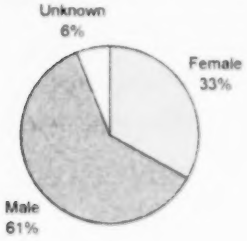
Secondary Source Data

Research licences issued by ARI from 1984 to 2000 were analyzed and grouped according to the broad disciplines of research they represented. These data were compared to the research needs defined by respondents in order to determine whether actual research activity was reflected in the research priority statements of respondents.

Assumptions & Limitations

Using a written questionnaire format to determine the thoughts, attitudes, and priorities of a population has many advantages: a questionnaire is cost-effective, reasonably simple to administer and fill-out, and does not require a huge commitment from those being surveyed. However, in analyzing the results of a written survey – especially in the North – two questions must be taken into account:

Graph 1
Gender of Survey Respondents



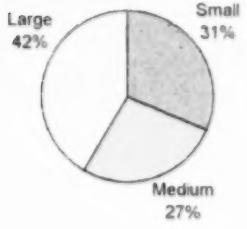
Are we measuring who we say we are?

The first question is whether or not the research sample (those who completed the questionnaire) accurately represents the entire population of the NWT, or whether it is biased towards one particular segment of the population. In order to determine the biases of the NWT Research Agenda Survey, respondents were analyzed according to socio-economic group, gender, and community size.

- *Socio-Economic Biases*: The 2001 NWT Research Agenda Survey was sent out only to organizations, thus eliminating the unemployed and illiterate members of communities, and many of the youth and elders. Survey results are therefore biased towards the employed (and therefore the more educated, literate, and of employable age) portion of the NWT population.

- *Gender Bias:* An analysis of survey respondents showed that the 2001 NWT Research Agenda Survey suffered from a gender bias. While the question of gender was not specifically asked in the questionnaire, an estimate regarding gender based on first names found that there were approximately twice as many male as female respondents (Graph 1).

Graph 2
Survey Respondents (NWT only) by Community Size



- *Community Size Bias:* To determine if there was a bias of respondents from one or more particular size of community, Northern responses to the survey were divided into three groups: Small (remote hamlets with less than 1000 people - a total of 25 communities); Medium (administrative centres in the North with between 1000 and 5000 people - a total of 5 communities); and Large (Northern centres with greater than 5000 people - one community). For the 2001 NWT Research Agenda Survey, responses were found to be approximately evenly distributed from these three size-classes (Graph 2).

Are we measuring what we say we are?

The second question is whether or not the measurement tool that we are using (a written questionnaire) is giving an accurate measure of the needs of the NWT population. When looked at as a whole, the population of the Northwest Territories is evenly divided between aboriginal and non-aboriginal residents. Broken down into specific communities however, there are only three communities (Yellowknife, Hay River, and Norman Wells) where the majority of the population is made up of non-aboriginals. In all other communities in the NWT, the majority of residents are aboriginal. To a certain extent, then, the NWT Research Agenda survey (and indeed most surveys conducted in the North) can be considered cross-cultural research. In the case of the NWT Research Agenda, the questionnaire used was written, sent out, tabulated, and analyzed almost entirely by one segment of the

NWT population (white professionals from large administrative centres). Cross-cultural research suffers inherently from a number of biases that must be taken into account when interpreting the results of this survey:

- ***Linguistic Biases***: The Northern Research Agenda survey was administered entirely in English. It is unclear whether or not all of the concepts in the survey are clear to people who's first language is not English – the situation in many communities across the NWT.

- ***Cultural Biases***: People and groups in the North may not be comfortable in expressing themselves and their needs in a written survey format.

- ***Cultural Reinterpretation Biases***: People may not be responding to the formal content of the survey, but rather to the cultural meaning that the survey's concepts might have for them.

Survey Limitations

When looking at the results of any survey, it is important to keep in mind the survey limitations and assumptions. ***Survey Limitations*** *are those factors which limit how well survey results reflect the actual thoughts and ideas of the survey respondents.*

There were several limitations to the NWT Research Agenda Survey 2001:

- There were some initial technical problems with the web-based survey. Although these were quickly addressed by our in-house technicians, this may have reduced the number of survey respondents and some survey responses may have been lost. Problems with the initial web-based survey also truncated (at 255 characters) some respondents' comments to some of the survey questions.

- Since the 1995 survey, ARI has worked to expand a database of organizations that either conducted research or were potential users of research conducted in NWT. Still, some appropriate agencies may have been missed in the survey distribution. Therefore, the results of the 2001 survey only represent the views of the organizations that received and responded to the survey.

- The survey was administered only in a written format. This excluded illiterate and non-English speaking individuals from the sample group.

- In the NWT, the survey was administered only to organizations. This excluded individuals who were not represented by one or more organizations.

- While the population in the NWT is fairly small, there are a large number of surveys typically completed each year. This has resulted in 'survey burn-out' amongst many residents, and may have reduced the response rate for our questionnaire.

- The design of the choice-list questions had some built in bias in that the sequence of the choices was not random (every survey sent out had the same choices listed in the same order).

- While the response rate for this survey may be typical, the low response rate (37%) means there is a potential for bias because there is no information from the organizations that failed to complete the survey.

Survey Assumptions *are the ideas and best guesses regarding survey results that are taken, or assumed, to be true.*

Survey Assumptions

In analyzing the results of the NWT Research Agenda Survey 2001, a number of assumptions were made:

- While the NWT Research Agenda is a survey of organizations and not individuals, we are assuming that the respondents to the survey spoke for the entire community, including the poor, the illiterate, the unemployed, the youth, and the elders.
- For the purposes of this survey, we are assuming that those organizations that chose to fill out the *Non-Researcher* version of the survey (organizations and agencies not conducting research) adequately represent the views of the majority of the communities in the NWT.
- By the same token, we are assuming that those organizations that chose to fill out the Researcher version of the survey (organizations and agencies conducting research) adequately represent the views of research organizations.
- While the NWT Research Agenda was administered completely in English, we are assuming that all survey respondents were comfortable enough in English to be able to respond truthfully and completely to survey questions.

It is important to keep in mind these survey limitations and assumptions when assessing the final results of the 2001 NWT Research Agenda Survey.

Results: Research Priorities

The first section of the 2001 NWT Research Agenda Survey dealt with determining priorities for research in the NWT. Respondents representing organizations not conducting research (**Non-Researchers**) were first asked if there was a need for research in their community or region. Those who felt that there was a need for research (92%, or 62 out of 68 respondents) were asked to choose, rank, and provide details on their community's top three priorities for research from the following list:

- Health and Well-being
- Social issues
- Wildlife Management
- Land Resources
- Fisheries / Marine
- Economic
- Culture and Heritage
- Northern Engineering
- Communication Technology
- Education
- Other (Please Identify) _____

Respondents representing organizations conducting research in the NWT (**Researchers**) were first asked if their organization was currently doing research in the NWT. Those organizations that were currently doing research (93%, or 83 out of 89 respondents) were also asked to choose, rank, and provide details on their organization's top three research priorities from the list above.

Top Research Priorities for Survey Respondents

The first method that was used to analyze the results of this section was to group all of the respondent's top three choices for research together (regardless of whether respondents ranked their choices as the first, second, or third priority for research). This information can be found in **Table 2** (page 14).

14% of respondents' choices for top research area were in the *Other* category. Survey respondents who classified themselves as Researchers cited *Other* choices much more frequently than did survey respondents who classified themselves as Non-Researchers. The responses listed under *Other* were broadly based and

frequently interdisciplinary in scope. The most frequently cited topics of research listed under *Other* were topics surrounding Climate Change, Environmental Assessment, Water Quality, and Sustainable Development.

The top three research priorities for Northern communities were clearly Health & Well-Being, Social Issues, and Education.

In spite of the long list of choices that were offered to respondents, and the high frequency of *Other* categories offered by respondents, clear priorities for research did emerge from the survey. When all survey responses (not including the *Other* category) were taken together, the three highest cited research priorities were *Health and Well-being* (chosen by 15% of respondents), *Land Resources* (14%), and *Social Issues* (12%). However, when survey responses were divided between the Non-Researcher group (representing research priorities for communities in the NWT) and Researchers (representing research priorities for research organizations) differences in priority were noted.

The top three research priorities for **Communities in the NWT** were clearly *Health and Well-Being* (chosen by 18% of Non-Researchers), *Social Issues* (17%) and *Education* (15%). No other category of research was chosen by more than 8% of Non-Researcher respondents.

Research organizations' top priorities for research were slightly different. *Land Resources* was the top priority for research, chosen by 18% of Northern-based Researchers and 17% of Southern-based Researchers. For Southern-based Researchers *Health and Well-Being* was ranked second (14%), followed by *Wildlife Management* (10%). Northern-based Researchers chose *Wildlife Management* (15%) as their second top priority for research, followed by *Health & Well-Being* and *Culture/Heritage* (tied for third at 10%). *Education* - a top priority for the Non-Researchers group - fell to close to the bottom of the list for the Researchers group.

Table 2
Survey Respondent's Top Three Research Priorities
Ranking and Percentage of Total Responses
Note: 'Other' responses not included in Rankings

Research Priority/Area	Overall	Non-Researchers	Researchers	
			North	South
Health& Well-being	**1 (15%)**	**1 (18%)**	**3/4(10%)**	**2 (14%)**
Land Resources	**2 (14%)**	4 (8%)	**1 (18%)**	**1 (17%)**
Social Issues	**3 (12%)**	**2 (17%)**	5/6 (9%)	4/5 (8%)
Wildlife Management	4 (10%)	7 (5%)	**2 (15%)**	**3 (10%)**
Education	5 (9%)	**3 (15%)**	8 (4%)	8 (5%)
Culture / Heritage	6 (8%)	5 (8%)	**3/4 (10%)**	4/5 (8%)
Economy	7 (7%)	6 (8%)	7 (8%)	9 (4%)
Fisheries / Marine	8 (7%)	8 (5%)	5/6 (9%)	7 (7%)
Northern Engineering	9 (4%)	10 (3%)	9 (2%)	6 (8%)
Communication Tech.	10 (2%)	9 (4%)	10 (0%)	10 (0%)
Other	- (14%)	- (8%)	- (15%)	- (21%)

Education, one of the top three research priorities for Northern communities, was a low priority for Research organizations.

The second method used to analyze survey results was to look at only the first choice for research of survey respondents (the research priority that survey respondents classified as #1). When looked at in this way, further evidence of differing priorities between Communities in the NWT and

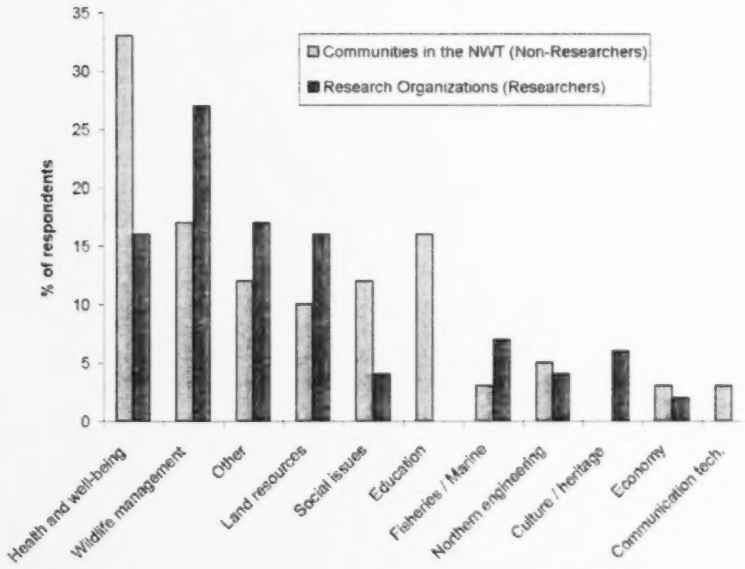
Research organizations was found (**Graph 3**). One third (33%) of Communities in the NWT ranked *Health and Well-being* as their top priority for research. *Education* was second (16%) and *Social Issues* was third (12%). For Research organizations, *Wildlife Management* was ranked as the top research priority (27% of respondents), with *Health and Well-Being* and *Land Resources* tied for second and third place (both chosen by 16% of respondents).

Although Wildlife Management was a top research priority for Research organizations, it was clearly not a first choice priority for Communities in the NWT, chosen by only 2% of Non-researchers as the first choice for research. Conversely, *Education* - which received the second highest number of votes by Communities in the NWT for highest priority for research - was not chosen as the number one research priority by any of the Research organizations.

For Northern communities, the highest ranked #1 priority for research was Health & Well-Being. For Research organizations, the highest ranked #1 priority for research was Wildlife Management

Graph 3

Survey Respondent's Top Research Priority: Non-Researchers & Researchers

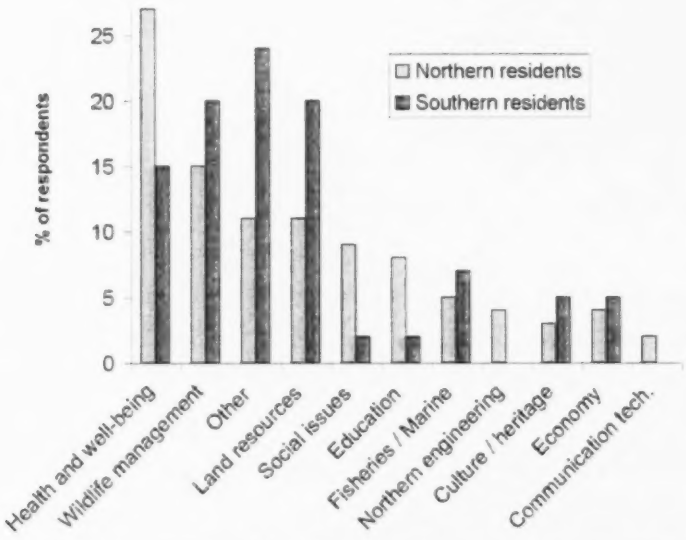


Differences in priority were also seen when survey respondents were divided between those living in the South and those living in the North (Graph 4 - page 16). For Northern residents, *Health and Well-being* received the greatest number of votes for top research priority (27% of respondents). For Southerners, *Health and Well-being* fell to third place, after *Wildlife Management* and *Land Resources* (both of which were chosen by 20% of respondents).

The fourth method used to analyze this section of the NWT Research Agenda Survey was to compare survey respondent's priorities for research with the amount of licensed research that is conducted in the NWT. As the official licensing body for research conducted in the NWT, the Aurora Research Institute is well situated to comment on the amount and type of research conducted in the NWT. All research licenses issued in the NWT from 1984 to 2000

For Northern residents, the #1 choice for research was Health & well-being. For Southern residents, the #1 choices for research were Wildlife Management and Land Resources

Graph 4
Survey Respondent's Top Research Priority: Southern and Northern Residents



(including those issued by the Prince of Wales Northern Heritage Centre; the NWT Department of Resources, Wildlife, and Economic Development; the Department of Fisheries and Oceans; Parks Canada; and the Aurora Research Institute) were classified into the 11 major research categories used in the NWT Research Agenda survey. A count of licenses by category revealed that the actual licensed research conducted in the North does not reflect the priorities for research chosen by survey participants (**Table 6**).

Table 3
Research Licenses Issued (1984-2000) compared with the NWT Research Agenda 2001 Priorities for Research

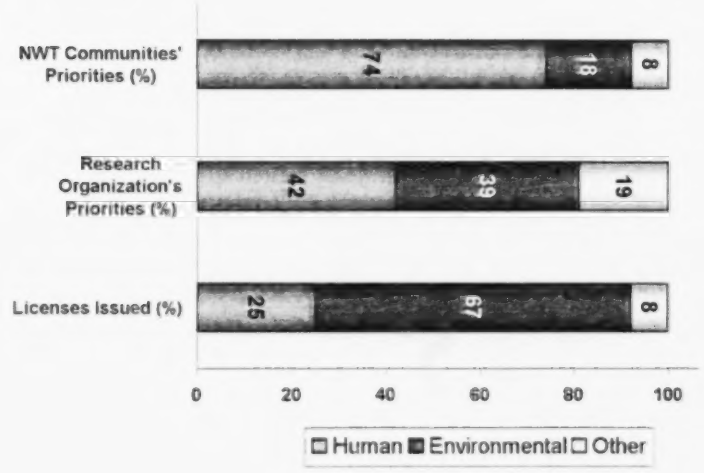
Research Area	Licenses Issued (%)	Researcher's Priorities (%)	Non-Researcher's Priorities (%)
Health & Well-being	4	12	18
Social Issues	6	8	17
Wildlife Management	36	13	5
Land Resources	24	18	8
Fisheries/Marine	9	8	5
Economic	2	6	8
Culture & Heritage	9	9	8
Northern Engineering	1	4	3
Communication Technology	1	0	4
Education	2	3	15
Other	8	19	8

The eleven research categories used in the survey were further grouped into broader categories of *Environmental* (Wildlife Management, Land Resources, and Fisheries/Marine); *Other*; and *Human* (all other categories) (**Graph 5**). While the

separation of research into the two categories of Human and Environmental is in some ways a false dichotomy (most research topics are at least partly both Human and Environmental in scope) this does highlight the difference in the major focus of research.

The Non-Researcher survey respondents (representing communities in the NWT) overwhelmingly (74%) chose Human-focused areas of research as their top priority for research. Environmentally-focused areas were a distant second (18%). The Researcher survey respondents (representing Research Organizations active in the NWT) cast equal votes for both Human-focused (42%) and Environmentally-focused (39%) areas of research. Neither group's priorities for research corresponded with the actual number of research licenses issued in the NWT, of which two-thirds were Environmentally-focused and only one-quarter were Human-focused.

Graph 5
NWT Research Agenda Survey Priorities compared to Research Licenses Granted (1984-2000) : Grouped Subject Areas



2/3 of Survey Respondents (1995 and 2001 surveys) chose Human-focused areas of research as their top priority. This contrasts with the 2/3 of Research Licenses issued that are primarily Environmentally focused.

The final method of analyzing this section of the NWT Research Agenda Survey was to compare the results of the 2001 survey to those of the 1995 survey to see if survey respondent's stated priorities had changed over time. This analysis was limited to responses from Northern residents from the 2001 survey, since all respondents in the 1995 survey were Northerners. In general, there was little difference in the results of the survey between the two years (**Table 4** - page 18). The overall top three research priorities for Northern residents for both survey years were *Social Issues*, *Health and Well-being*, and *Education*.

Survey respondents from the NWT chose Social Issues, Health & Well-Being, and Education as the top three research priorities in both 1995 and 2001.

Table 4
Changes in Opinion About Research Needs Over Time (Northern Residents Only)

Research Priority	1995	2001
Social Issues	**1 (17%)**	**1 (16%)**
Health and Well-being	**2 (15%)**	**2 (15%)**
Education	**3 (12%)**	**3 (11%)**
Economy	4 (10%)	6 (9%)
Culture / Heritage	5 (10%)	5 (9%)
Land Resources	6 (8%)	4 (10)%
Wildlife Management	7 (7%)	7 (8%)
Fisheries / Marine	8/9 (6%)	9 (6%)
Communication Tech.	8/9 (6%)	10 (4%)
Northern Engineering	10 (5%)	11 (4%)
Other	11 (4%)	8 (8%)

Discussion

No matter which way the results are analyzed, it is clear that for the majority of residents in the NWT, the top priorities for research are Social Issues, Health and Well-Being, and Education.

This becomes understandable - and perhaps expected - when one looks at population statistics for the NWT. Although progress is being made, and the situation is not all negative, the NWT does lag behind the rest of Canada in several key Health, Social, and Educational indicators. For example:

- From 1991 to 1999, the average life expectancy at birth for NWT residents was consistently 2-3 years lower than the Canadian average.

- Infant mortality rates – a widely accepted measure of child health and the overall well-being of society – are significantly higher in the NWT than the rest of Canada (Report to Residents of the Northwest Territories on Comparable Health and Health System Indicators, Department of Health and Social Services, Government of the Northwest Territories).

- NWT education levels remain below the Canadian rate in some areas, for example fewer people in the NWT have a high school diploma as their highest level of education than in the rest of Canada (8% versus 14%) (Education, Culture and Employment Post-Secondary Indicators Report, Government of the Northwest Territories, 1999).

- The NWT has a much higher percentage of people (compared to the Canadian average) who drink heavily (consuming more than five alcoholic drinks at one time), use illegal drugs, sniff solvents or aerosols, or smoke cigarettes.

Survey results also show that the Research organizations' priorities are somewhat different than those of NWT residents. Research organizations tend to place a much higher priority on environmentally focused areas of research such as Land Resources and Wildlife Management.

This becomes understandable as well when one looks at the large land area of the NWT (over 1.3 million square kilometers) and the small population (just over 41,000). As a comparison, the population density of the NWT (40.9 people/km^2)

is just 0.3% of the population density of Ontario - Canada's most densely populated province.

The issue brought up in this survey that must be addressed is the discrepancy between Northern resident's stated research priorities and actual research conducted (according to licenses issued). While much public attention is made about listening to Northern residents and their concerns and priorities for research, this attention does not appear to seriously affect actual research. Even the stated research priorities of research organizations does not closely line up with the numbers and types of research licenses issued. There are a number of reasons why this might be so:

- The amount and type of research conducted often depends more on funding organizations priorities and needs (which are increasingly industry driven) and less on communities' research priorities and needs, or the mandates of specific research organizations.

- Many research activities in the NWT are not licensed. Government departments especially conduct many activities that are considered 'research' but are not currently licensed. The following are just a few examples of unlicensed research reports (all taken from the Government of the Northwest Territories web-site):

  - 1996 Population Health Survey
  - 1996 Alcohol and Drug Survey
  - 1999 Labour Market Survey
  - 1999 Tobacco Use Survey
  - 2000 Housing Needs Survey
  - 2002 Healthy Workplace Project

While the discrepancies brought up in this survey are in some ways understandable, they are not justifiable. Stakeholders in the research process in the NWT - including communities, researchers, government departments, industry, non-governmental organizations and funders must begin to work together to develop not just a more comprehensive research agenda and goals, but a workable strategy for its achievement.

A complete listing of Survey Respondent's comments on priority areas of research, as well as a complete listing of *Other* research topics submitted by survey respondents can be found in **Appendix A.**

RESULTS: COMMUNICATION

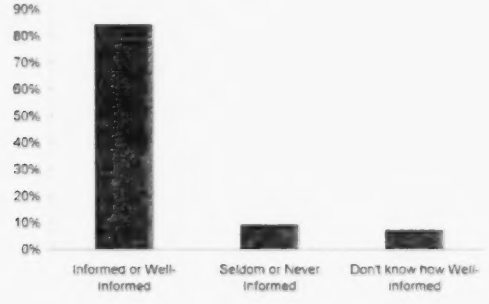
The second section of the NWT Research Agenda Survey 2001 dealt with communication between ***Researchers*** (Organizations and Agencies Conducting Research in the NWT) and ***Non-Researchers*** (Organizations and Agencies Not Conducting Research). ***Researchers*** were asked how much host communities/ agencies know about research projects while they are going on and how often researchers send reports or information back to the community or host agency once the research project is over. Researchers were also asked how the research needs of the NWT could be better communicated to them. ***Non-Researchers*** were asked how informed they were about research activities taking place in their community or land use area and whether they received reports from researchers working in their area. Both groups were also asked to choose their three most effective methods of communicating research results.

THE FLOW OF INFORMATION

Most Researchers (84%) believe that host communities and agencies are *Informed* or *Well-Informed* about research activities (**Graph 6**). However, only 44% of Non-Researchers felt that they are *Informed* or *Well-Informed* (**Graph 7**). Furthermore, almost half (42%) of Non-Researchers indicated that they feel *Seldom-Informed* about research activities that are taking place or are going to take place in their community (at the same time, it is important to point out that only 1 of the 66

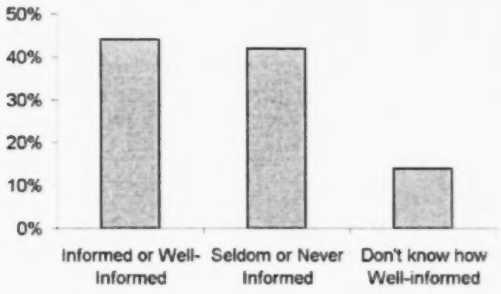
84% of Researchers feel that host communities and agencies in the NWT are informed or well-informed about research projects

Graph 6
Researcher's opinions on how well-informed communities/agencies in the NWT are about current research projects



44% of Non-Researchers in the NWT feel that they are informed or well-informed about research projects

Graph 7
Non-Researchers opinions' on how well-informed they are about current research projects



respondents from organizations not conducting research indicated that they are *Never-Informed* about research projects).

Researchers and Non-researchers also had different opinions regarding sending and receiving research reports (**Table 5**). Virtually all Researchers (96%) reported that they send reports and/or information to host communities after their project has ended. This contrasts with the 60% of the Non-Researcher respondents who reported receiving information.

Table 5
Awareness about whether Research Reports were sent and received after completion of research projects

Researchers: Do you send reports/ info. to host communities after a project has ended?

Yes	No	Don't Know
96%	1%	3%

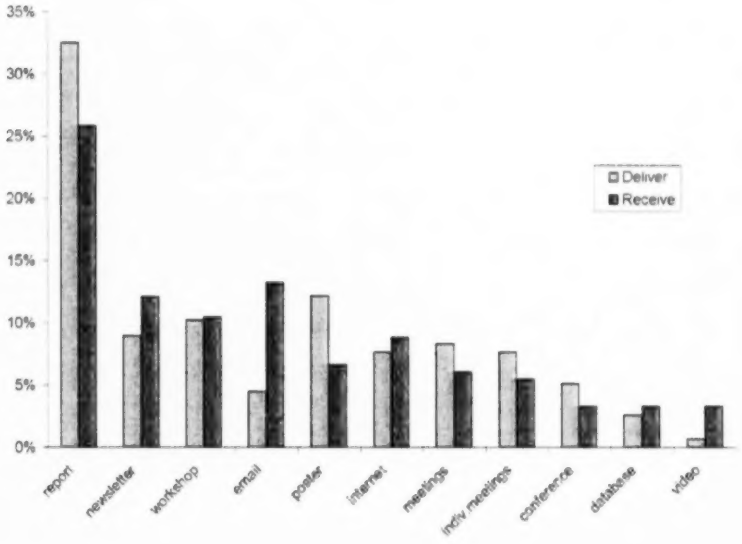
Non-Researchers: Do you get reports/info. after a research project is completed?

Yes	No	Don't Know
60%	27%	13%

Methods of Improving Communication

Survey respondents were asked to choose communication methods that would be most useful in using research results (Non-Researchers) and the most effective methods of sending research results (Researchers). Percentages and rankings of the frequency that each information delivery method was chosen are shown in **Graph 7** (page 22). For all survey respondents, *Plain Language Reports* were overwhelmingly chosen as the preferred way to both send and receive information. Non-Researchers chose *E-mail* and *Newsletters* as the #2 and #3 choice for receiving information, while Researchers chose *Posters* and *Workshops* as their #2 or #3 ranking.

Graph 8
Preferred Methods of Receiving (Non-Researchers) and Delivering (Researchers) Research Results



For all survey respondents, the use of Plain Language Reports was the #1 preferred method for both delivering and receiving research results

Communication of NWT Research Needs

Both Northern and Southern-based Researchers were asked "How can Northern research needs be better communicated to research and granting agencies?". Although there was some difference between Northern and Southern Researchers, the top two choices from survey respondents were clearly *Workshops* and *A Better Understanding of the Co-Management Process* (Table 7).

Table 7
Recommended ways to communicate research needs to researchers

	Northern Researchers	Southern Researchers
Workshops	**42%**	**31%**
Better Understanding of Co-management	**32%**	**37%**
Orientation to the north	0%	3%
Understand Licensing	9%	9%
Research Newsletters	9%	5%
Electronic Communication	5%	2%
Teleconferences	3%	9%

Discussion

The first conclusion that we can draw from survey results is that there is a communication gap between Researchers and Non-Researchers in the NWT. This is evidenced by the difference of opinion about how well informed community groups are, as well as the difference in responses to how often research reports were sent/

received. If we assume that the views of Non-Researchers from the NWT represent those of host agencies and communities in the NWT, these findings point to a gap in effective communication between researchers and community groups. This gap is illustrated further by the relatively high percentage of respondents (especially Non-Researchers) who reported that they did not know how well informed they were about current research projects. There are many possible reasons for this gap, including:

- Researchers may not be as effective in sending reports as they think they are;
- Organizations sampled may not be those that are not receiving the reports;
- Reports may not be utilized or distributed properly.

A partial answer to this communication gap may be found in another question in the survey. Survey results show clearly that both for Researchers and Non-Researchers, the preferred method of both sending and receiving research results is through Plain Language Reports. While this may sound like a simple solution, it is not necessarily an easy one. Research results received at the Aurora Research Institute to be included in the annual 'Compendium of Research' are typically not written in a Plain Language format, indicating either a lack of knowledge on the part of researchers on how to write Plain Language reports, a lack of time to commit to doing this, or a lack of interest in fulfilling this part of their research contract.

Another potential answer to the communication gap between Researchers and Non-Researchers may be found in the last question in this section: recommended ways to communicate research needs to southern researchers. The results of this question indicate that Workshops are the preferred method of communicating research needs and priorities, and that researchers lack sufficient knowledge of the Co-management process in the North. What is surprising is that this lack of knowledge regarding co-management and it's implications for research priority setting is true for both Northern and Southern-based researchers: a clear call for action from organizations involved in the co-management process.

Further comments from survey participants on relationships and the flow of information between Researchers and Non-Researchers can be found in Appendix B. Comments from Non-Researchers on how research information they receive can be made more useful can be found in **Appendix C.**

RESULTS: ROLE OF THE ARI

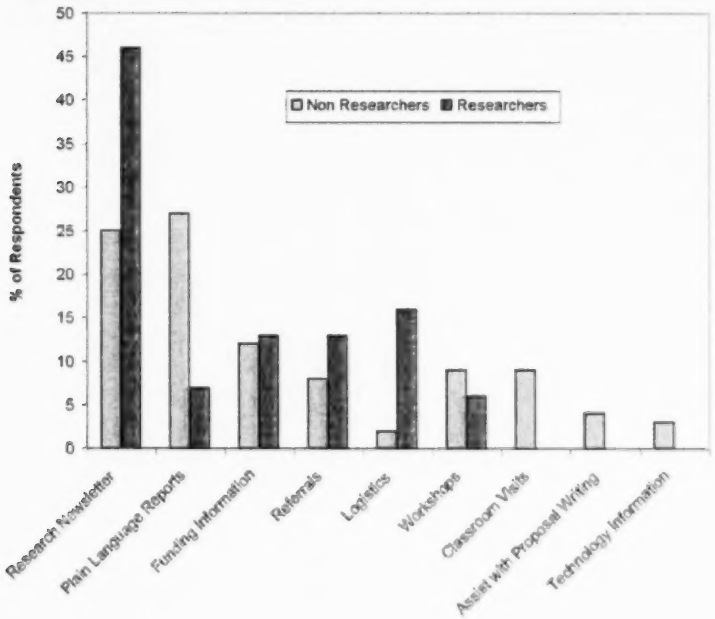
The third section of the 2001 NWT Research Agenda Survey dealt with the role of the Aurora Research Institute. Survey Respondents were asked what type of services they would like to see the ARI provide. Respondents were asked to choose their preferences from a list or to provide their own options for services that the ARI could provide.

PREFERRED ARI SERVICES

The preferred services respondents would like the ARI to provide (divided between Researchers and Non-Researchers) are shown in Graph 7. For Non-Researchers *Plain Language Reports*, followed closely by a *Research Newsletter*, were the top two choices for services that the ARI could provide. Researchers clearly indicated

Graph 9

Survey Respondents Preferred Services Delivered by ARI: % of Total Responses



that the most important service they would like the ARI to provide is a *Research Newsletter.* In fact, for Researchers a *Research Newsletter* received nearly three times as many votes as the next most popular choice, *Logistical Support.* Even Southern-based Researchers – traditionally an important ARI client group for logistical support in the North - ranked a *Research Newsletter* above Logistical Support by nearly a two to one margin.

Discussion

Survey results showed that Non-Researchers would like the ARI to provide Plain Language Reports and/or a Research Newsletter (two very closely linked answers, that when put together received more than half of Non-Researchers votes). The fact that Researchers as well chose a Research Newsletter as their top preference for ARI provided service raises questions about the role of the ARI and the amount of staff time and funding that is allocated to such a task. While Logistical Support is (and will remain) an important part of ARI's mandate in the North, it is evident that we need to spend more time and energy on informing both Researchers and Non-Researchers about the research that is going on in the NWT.

RECOMMENDATIONS

There are many challenges involved in developing research agendas - and strategies for achieving them - in Canada's North. These include:

i. The number of agencies setting research agendas;

ii. Poor communication and consultation between some agencies with respect to research agendas

iii. Low levels of political commitment, at the federal level, to research supporting international protocols and agreements;

iv. Absence of federal political will to promote Canadian leadership in northern research;

v. Inadequate funds over two decades for northern research and training;

vi. No university in the Arctic addressing the needs of the northern communities (Johnson, P. G. 2000. Setting Priorities for Research in the North of Canada, The Northern Review #22).

The NWT Research Agenda Survey 2001 is meant to be, as was the 1995 survey, only one step in developing a Research Agenda that truly reflects the needs and priorities of NWT residents. It is not intended to be the last or the most authoritative word on what the research needs of the NWT are. It is intended to stimulate discussion, and to be a starting point for developing a comprehensive and workable strategy for research in the NWT. There are a number of possibilities for building on and improving the results of this survey. These include:

- Hosting a series of focus groups in communities across the Northwest Territories to get feedback on and verify the results of this survey.

- Building a comprehensive list of the various "Northern Research Agendas" that have been developed by Federal, Territorial, Aboriginal, and non-governmental organizations and groups.

- Hosting a conference that brings together NWT residents and northern-based researchers with southern-based researchers, universities and funding bodies to cooperatively look at building a thorough and implementable research strategy for the North.

Appendix A
Survey Respondent's Comments on Research Priorities

Part 1- Comments from Researchers on their organizations' research priorities

Health & Well-being

- As a mental health consultant, my primary area of interest is in understanding the population that experiences mental illness and mental health difficulties: who they are; where they live & receive services; what services they receive & from whom
- Deafness; community health - attachment to place (healing/sacred sites)
- Determinates of health, cost effectiveness of interventions, health impact assessment
- Development of northern-based research capacity; streamlining of the bureaucracy for the licensing of scientific research
- Existing Support services; support services required and the gap between the two. Support and resources for educators.
- Faculty in graduate programs analysis of cultural content in nursing programs
- Health status, health determinants, health services, communicable diseases (I.e. cancer) injuries and poisonings
- I have been interested in adult education, training for employment, and human development.
- Living conditions survey (part of aboriginal people's survey in census)
- Living conditions survey (part of Aboriginal People's Survey in census)
- Natural hazards
- Outreach to schools and [educational institution]
- Support for students in the areas of counselling, personal well-being, behaviour, attendance and social issues.
- The [organization] develops and provides a variety of educational programs featuring the culture and history of the NWT. Research is undertaken in the specific subject matter, as well as in learning theory.

Social Issues

- As related to economics (educational levels, etc.)
- Community development, impacts of social programs
- I don't think it is possible to separate social development and well-being from economic and political analysis.
- Industrial impact on socio-economic status of NWT communities
- Other areas we are interested in include: addictions, family violence, child welfare
- Social Issues - Gambling
- Social issues, as related to economics (educational levels, etc.)
- Social support
- Unemployment

Wildlife Management

- Assessment of body conditions of barren-ground caribou as a means of monitoring herd well-being
- Bison Moose, Fur bearers
- Comply with US/Canada Treaty and agreement on surveys and banding
- Fisheries stock assessment, ecosystem studies, scientific advise on fisheries management objectives (in concert with co-management organizations)
- Harvest studies of fish and marine mammals
- Impacts of oil and gas activity and other developments on important subsistence species like caribou; more baseline information about other mammal species like furbearers, Dall sheep, etc.; predicting and mitigating impacts of climate change…
- Mountain Caribou, Barren-ground Caribou, Moose, Musk-ox, Dall's Sheep —> recruitment surveys, photo census
- Population counts, classification counts, population health, Wildlife protection through enforcement. Most of this work is carried out cooperatively with YTG, RWED, DFO CWS and our co-management partners. The primary focus of the research is on long-term monitoring
- Population dynamics, status and trends in breeding ecology
- Snow goose management, habitat condition
- Status of wildlife populations and wildlife habitat. Ability of wildlife populations to support harvesting.
- Surveys and studies of migratory birds, their populations, and habitat
- Sustainable use
- Ungulate research (caribou, moose, bison, etc.); fur-bearers research; biodiversity, conservation, ecosystem functions, natural variation
- Wildlife species abundance, distribution, habitat use
- Work done on monitoring/research caribou, muskox, birds, moose Dall sheep in three national parks

Land Resources

- Aggregate sources, groundwater availability and contamination, surface water quality
- Assess habitat conditions for migratory bird production
- Availability for development
- Bio-Physical, Traditional Resources (Fish, Wildlife, Plants)
- Develop best practices guide for oil and gas development; further research on best practices for oil and gas development in a northern ecosystem;
- Fish species, forest inventory
- Forestry, vegetation classification, burn history
- Geological mapping of bedrock and surficial material
- Groundwater in permafrost region
- Habitat for migratory birds
- Habitat impacts, species-habitat relations
- Habitat integrity, Sanctuary management
- Hydro-electric development
- Land and resource use: bio-physical, traditional, resources (fish, wildlife, plants)
- Land Resources - for use as parks/protected areas
- Land use practices, soil capability, environmental protection, conservation methods
- Mining and exploration
- Monitoring the effect of development on barren ground caribou
- Our botanists are interested in the identification and distribution of plants in the NWT.
- [Organization] conducts or supports a number of research projects related to land resources.
- Permafrost, Climate Change
- Reconnaissance surveys and mapping to assess potential for diamond, gold or base metal occurrences
- Terrain disturbance in response to human activities and climate change
- The Archaeology Program has regulatory responsibilities for preservation of archaeological sites, and participates in a variety of land management regimes. Research is conducted to ensure that information is comprehensive and accurate.
- Traditional knowledge, genealogy, replication of traditional [Aboriginal group] material culture
- Vegetation abundance and distribution
- Two types of research are conducted: 1. literature research of international sources, 2. project specific research using project (developer) data, public data, and employee surveys. Both types of research are directed at understanding the impacts of resource development projects on the NWT

Fisheries/Marine

- Assessment of marine benthic invertebrate communities
- Char genetics, Beluga reproduction, Population estimates, index netting, etc.
- Coney, Lake Trout, contaminants, stock assessments, movement analysis, heavy metal contaminations
- Fish and marine mammal biology and population research including surveys, monitoring, experimental management and experimental research, traditional ecological knowledge in the Mackenzie Delta and Beaufort Sea
- Fish health, contaminants, fish habitat, fish distribution
- Fisheries stock assessment (marine and freshwater), fish habitat studies, ecosystem studies, productivity/marine foodchain studies, marine mammal research, oceanography, hydrographic charting
- Hydrology of char spawning and overwintering watersheds
- Impact of climate change on marine foodwebs; links between pelagic and benthic ecosystems; pollution and biomagnification in marine environments
- Impacts of oil and gas activity and other developments on important subsistence species like broad whitefish, inconnu and charr; mapping of critical habitats like spawning areas; impacts of climate change on fish populations and habitat; developing monitoring
- Inventory of fish species in three national parks
- Polar bears and their habitat. Habitat for marine birds such as eiders
- Population sizes and distributions, sustainable use, habitat issues
- Reproduction and condition of ringed seals and beluga whales; distribution, movements and diving of ringed seals; stock structure or harvested Arctic Charr and Dolly Varden stocks

Economic

- Business viability
- Business ____, GDP ____, employment, investment, resource development
- Cost of production research, marketing support research
- Economics - Job needs, Job creation, Employment levels, etc.
- Economic Development/Political - Role of Impact Benefits Agreement
- Job needs, Job creation, Employment levels, etc.

Culture & Heritage

- Archaeological investigations - inventory, site assessment, interpretation and systematic data recovery
- Archaeology monitoring of cultural sites throughout the three parks.
- Archaeology, Ethnohistory, Traditional Knowledge
- Culture - Best Practices for Language Retention
- Integration of culture-based education into school curricula and programs.
- It is important to consider traditional knowledge and the interface between TK and western medicine/social services.
- Ongoing monitoring of archaeological sites in three national parks. Inventory/surveying of new sites, monitoring old sites
- The [Organization] has responsibilities and research interests in the languages, culture and history of the entire NWT. The [specific] programs are the most actively involved in research in these areas.
- Traditional land use, place names and history, ethnoarchaeology, ethnobotany
- Use of traditional knowledge with ecological science
- We work with archaeologists from the NWT on the identification and analysis of animal bones from archaeological sites.

Northern Engineering

- Environmental studies
- Improve the design, construction and maintenance practices for roads, airports and ferry infrastructure.
- Permafrost studies
- Sea ice properties, ice forces on structures
- Slope and surface stability in a regional, geological context relative to infrastructure, especially transport corridors
- Slope stability in glacial sediments and bedrock including permafrost terrain, distribution and character of permafrost
- Aquatic processes

Education

- Adult education prior learning assessment
- Early childhood development
- Language research and instruction, development of curriculum materials
- Train new hires and indigenous employees

Other

- Agricultural - Demonstration plots, Territorial Agricultural Research Institute, Waste management, Research on farm management services
- Aquatic Processes - studying what drives aquatic systems in northern latitudes
- Archaeology - we conduct basic archaeological research into the history of the NWT
- Climate Change - using sediments to track long-term climactic change
- Climate Change - Community-based observations of climate change, impacts and adaptations
- Climate Change - Effects of climate change on arctic hydrology by investigating paleoclimate systems
- Climate Change - Permafrost research and coastal studies relative to climate change
- Contaminants - Environmental contaminants and their impact on fish and marine mammals, as well as an interest in the quality of country foods
- Contaminants/Ecological Health
- Contaminated site assessment - Assess and implement cost-effective ways of dealing with contaminated airport facilities.
- Cumulative Effects Assessment and Management - Information is needed on how impacts of all human activities interact to affect the landscape and on the landscape's ability to support biodiversity over the long term. This information will support decision making processes and direct mitigation and monitoring
- Disturbance reclamation

- Ecosystem research - Marine productivity, energy flow, benthic studies, marine mammal studies
- Energy
- Entomology/Biology
- Environmental Assessment Baseline - Baseline data on key ecosystem components that will enable impacts of development activities to be appropriately assessed.
- Environmental Assessment - studying lakes and rivers to study local and long-range impacts
- Export
- For the last twenty years I have been working to understand political and economic development in the three territories. A related area of interest in federal northern development policy, and the rise of Aboriginal self-government
- Geology - Permafrost related studies
- Geology - Permafrost, stratigraphy of quaternary sediments, sedimentology
- Geology (biostratigraphy) - Both microscopic fossils (dissolved from rock by acids) and macroscopic fossils of early vertebrates are helpful for dating and correlating the Silurian and Devonian rocks of the NWT with those of other regions of the world, especially those from Nunavut
- History - we also conduct historical research, for publications and exhibitions. We are currently planning a major exhibition on Inuvialuit history
- Housing
- Hydrology, Glaciology
- Impact of Climate Change - Study and mitigate the impact of global warming and permafrost degradation on airport infrastructure
- Language
- Long-term monitoring
- Marine Transportation - ice regime system, global loads and local pressures on vessels in ice
- Natural Resources and Environment - Forest ecology, land management, forest policy, biodiversity, environmental sustainability, fisheries, wildlife, plant biology, Landscape ecology, environmental ethics, First Nations perspectives on land and resources, oil and gas planning and exploration
- Offshore Safety - evacuation safety from offshore structures in ice-covered waters
- Our museum is interested in discovering bones and other traces of fossil fish and other vertebrates, as well as minerals, from many localities in the NWT
- Paleoecology - The fossils and the rocks themselves provide significant information for understanding the ancient environments that existed hundreds of millions of years ago in the Mackenzie Mountains. Understanding ancient environments is an important tool in prediction
- Public Policy
- Pure ivory tower science only
- Rural, remote, aboriginal, and northern health - population health, social determinants of health, addictions, FAS, substance abuse, First Nations Health, health services policy, health services delivery, telehealth, telemedicine, CME, environmental health, child welfare, women's health…
- Sustainability of Communities - determinants of community sustainability, social capital, economic diversification, resource dependent community stability, social services and sustainability, health and sustainability, small town dynamics, resource recreation and tourism, community plan
- Sustainable Development
- Sustainable Development
- Sustainable Development
- Sustainable Development
- Sustainable Development
- Tourism
- Vertebrate Paleontology - Study of the anatomy and relationships of early vertebrates (fishes etc.) from the Silurian and Devonian formations of the Mackenzie Mountains, western NWT. These fossil animals are important for understanding the evolutionary origins of the major group
- Water Quality - Water Quality and Sediment Studies on various NWT rivers, including Hay, Slave, Liard, Coppermine, Peel, Lockhart Rivers
- Water Quantity - Water Balance Studies including Tibbitt Lake Microclimate, Daring Lake Snow Hydrology, Ingraham Tail Dendro-Hydrology
- Water Resources - Evaporation studies for Minesite Water Management 1993 to present

Part 2 - Comments from Non-Researchers on their priorities for research

Health & Well-Being

- Affordable, adequate, and suitable housing
- Basic health studies on diet and correlations to cancer
- Cancer research - many people are dying to stomach cancer in our community/region
- Climate effects, diabetes, fat babies, Aids other STD's, alcohol effects, FAS FAE, vitamin therapy, SAD, depression
- Comparing present life styles to what was done by our parents and grandparents that prolonged their life
- Every year we hear of different diseases. It's good to know where we are at with health and well-being
- FAS/FAE, Addictions, Mental Health
- FAS/FAE, Uranium contamination, arsenic trioxide, water quality
- Health and well-being: why are more people dying from cancer?
- Health concerns of community residents, how to get people to be more responsible for their care and well being i.e. dental, diet, nutrition, medication
- Healthy eating habits and access to aboriginal language health care workers in our community
- How active are Northerners? How knowledgeable are we about the importance of physical activity and diet for our well being?
- Identify factors limiting personal control of wellness. Recommend strategies for community driven change process
- Mental health, suicide, violence
- Practical possibilities - how to support persons with disabilities in small isolated communities
- Suicide. Drugs. Alcohol. All are ongoing problems in many communities of the north.
- The amount of people contracting cancer; why and how? What is the source (water?)
- There are people here sick all the time. A change in lifestyle would greatly improve health and wellbeing.
- To assess the real effects of development and/or the lack of development on the health and well being of the residents of the north
- To determine whether or not the health centre that currently exists is meeting the needs of its clients
- What hazards exist in our community as a result of the many years of oil activity within it.

Social Issues

- All social issues related to urban and regional planning activity - specific to community and region
- Child Abuse, Family Violence,
- Disability values and practices among disabled persons
- Dynamics in community are changing, half the population is under . We have a very large youth group that needs help.
- Educate people on how to live and raise their families
- Effects of social issues on education success... & factors and best practices/strategies
- Family violence, is it a learned behavior, if so, how can we break the cycle of violence. Alcohol abuse: Why does everybody get extremely drunk, if people were taught the difference between the disease model or the psycho-social model of alcohol consumption
- Gambling and spousal abuse, drugs and alcohol abuse
- Good to know what's being done in the North and what other steps we need to take or other solutions there are
- Housing needs in Communities
- Social Issues - People at the community level should be given an opportunity to attend a healing program
- Social issues - young and old need to socialize together
- Social issues within community, lacks resources, youth centre
- Study the socio-economic impact of the diamond industry on the Government of the NWT
- Substance abuse (alcohol; tobacco; drugs); FAS/FAE; family violence; people's basic needs for income, food, shelter, security;
- Sustainable Development
- To identify community issues/problems and ways to address - programs, etc.
- To keep our youth in school and the addictions that are in community
- Various
- What are the prime factors contributing to the behaviours in children and how can this be improved
- What do communities want to do to deal with social issues
- What impact does the home support have on the emotional well being of the students

Wildlife Management

- a) impact on wildlife and wildlife habitat of climate change; b) mitigation of impacts of climate change
- Current problems with Grizzly bears
- TEK - Use of Wildlife

- Why is there a decline in specific wildlife in the area. Why are we see other inhabitants of species in the area
- Wildlife Management - Need to know disturbance thresholds for species harvested by Inuvialuit. I.e. when does disturbance due to development negatively affect a given population
- Wildlife populations, habitat needs, mapping of habitat, current cumulative impacts and projected impacts on populations and habitat.
- With increased oil and gas activities in the region, we have to continue to monitor wildlife movements and population

Land Resources

- Cumulative effects of land use, habitat management and classification
- Estimate of resources and how to handle them if land claims are settled
- Exploration of natural resources, especially regarding diamonds and oil/pipelines. Database of infrastructure of the North
- Forestry (timber); soil, how is global warming impacting these resources
- Geologic mapping, specific geologic investigations and studies.
- Land Resources - Need to determine the threshold at which land resources can not maintain ecosystem functioning
- Mapping of land use (traditional and industrial), review of the Canadian Mining Regulations, consultation process with communities, inclusion of traditional knowledge into the permitting process.
- need more land in some communities, development not keeping up with growth.
- People like to know where we are with land claims etc.
- Related to new business, technology and educational/training requirements.
- Resource development. Resource management, resource revenue
- Traditional Environmental Knowledge; Environmental impacts of sumps used in oil and gas drilling
- What has happened, if anything to our land as a result of the protracted oil activity.

Fisheries/Marine

- a) impact on marine and inland habitat and species of climate change b) mitigation of impacts of climate change
- aquatic habitat classification and management, effluent quality, cumulative effects; integrated resource management
- Comprehensive study including scanning to get reliable data on fish numbers, plan for fish management while we still have the resource.
- Marine exploration - polar shelf, seals, undersea oil/gas/mineral wealth. Geophysical anomaly's, polynyas, ice drift history/thickness, etc.
- Status. This also applies to fish and marine mammals

Economic

- Comparison studies between Yellowknife and southern communities of comparable size and challenges.
- Economic: What are the economic impacts of tourism?
- Economics very low employment a major factor
- Employment opportunities for Northeners...especially first nation youth
- Mineral deposits research
- No understanding on anything except a wage economy
- Possible economic sectors that are viable for the north
- strategic planning, entrepreneurship, partnership,
- The economy is important to keep up the self esteem of our younger generation more training is needed with [?]

Culture & Heritage

- Cultural songs, culture in school, heritage sites
- Culture & heritage - people want to go back to the land but oil companies and coming in again; learn traditional skills/knowledge
- Culture and heritage reinforces the language. To keep our language alive we must observe the culture and heritage
- Culture and Heritage: As it relates to tourism
- In our community, the elders seen to have given up efforts of passing on cultural and traditional knowledge to the young people. Why is that. How can cultural and traditional knowledge be passed on. Can it be done through the school, find funding for
- Integrity and respect are an integral part of the tourism industry.
- Projects that enhance understanding of northern history from early explorers to the opening of the north and the resulting impact on the native people; also continued research to facilitate land claims
- The role of culture and heritage in education... & best practices/strategies
- There is a need for communities (and peoples) to find a balance between modern technology and traditional knowledge.
- to access funding to have a cultural camp for members so our elders can teach he youth our heritage

- To maintain a healthy culture and preserve our heritage

Northern Engineering

- a) impact of climate change on northern infrastructure; b) adaptation and mitigation of impacts of climate change; c) strategies for reducing anthropogenic causes of climate change
- Design and operations of water, sewage and solid waste infrastructure; shoreline protection
- Permafrost, climate change, pollutants
- Pilings, Insulation Factors, Heating, Air Quality, Cost Savings, Pollution
- Research way to improve the NWT capacity in the fields of engineering, technical and instrumentation trades

Communication Technology

- Better and faster communications between communities and Government of the NWT (internet/e-mail)
- Our Northwestel exchange service is dates and needs to be upgraded. Communication systems are very poor, we don't even have an ISP
- Research the use of communication technology to improve literacy and numeracy through computer driven courses and the internet
- Very little interest in Internet use and accessibility except worksites

Education

- Class size, comparison quality of students graduating north as opposed to south, quality of education after our last cutbacks.
- Community Environmental Education
- Early Start Programs, Re-training, Improving the System, Internet Learning
- Education - why are there no graduates from Lutsel K'e? Why is it harder for students in grade when they go to another school outside the community?
- Education standards - too low? Educational incentives for 'further' education. Education and culture
- Education students not at grade level required; a lot of discipline problems
- Education: Success and failures for students with disabilities
- Help lead productive lives
- Improving the quality through change
- Is grade in small communities increasing the number of students achieving post-secondary education? What is the proportion of students who go south to school that return to the north to work?
- Provide students a basic knowledge of earth science and geology. How and why do these subjects affect their lives and what careers are available.
- Research on emerging industries so that educational institutions and businesses can prepare to meet new challenges.
- Research why people do not think education is important
- School development, school self evaluation, school governance and parents involvement
- The issue of FAS/FAE and its effects on the affected individuals and families
- There is no education program in schools to inform children on self-government responsibilities legislation
- There is no substitute for education. Youth need to develop skills and tools necessary to feel confident about their abilities to succeed. Education is necessary to keep pace with community expectations, changing education programs and evolving government
- To determine what areas are required for training and what has to be done to implement training in these areas. I don't believe that Industry or Fed government are obliged to provide training instead of the Government of the NWT. They can provide
- To establish statistics regarding drop-out rate, graduation rate, post-secondary %'s, etc.
- Tourism training is important to build awareness that the tourism industry is a viable career and a sustainable renewable resource industry.
- Why is there such a high drop-out rate in high school among the aboriginal youth.

Other

- Aboriginal standard of living: is self-government the panacea? Will self-government and land claims improve the quality of life for all aboriginals or only an elite few? Why can't our democratic government solve this problem?
- Air Quality
- Alcohol abuse - FAS/FAE How many people in the NWT suffer from FAS/FAE? Why do we allow this crime to continue? How can the crime be prevented?
- All tourism sectors and modes of transportation numbers are important in planning, marketing, and product development.
- Climate Change Impacts and Adaptation; Policy Responses; Education and Communication
- Contaminant sites research I.e. Colomac clean-up, local contaminant concerns.

- Contaminants trends Northern Contaminants Program - funds research on contaminants trends, education, communication; NWT Environmental Contaminants Committee
- Does the pupil-teacher ratio have any effect on the outcome of the students
- Ecology
- Economic
- Ecosystem Management. Watershed management, integrated resource management, long-term planning and monitoring
- Education
- Environmental assessments in proposed oil and gas development areas (similar to what [Consultant Group] did in the Sahtu)
- Environmental Impact Monitoring
- Fisheries
- Home Structure What are the prime factors contributing to the behaviours in children and how can this be improved
- Housing Needs Housing - Research needed to determine what needs are based on tradition
- How to assist community to take more responsibility for their health
- Impact of Oil Activity in our community
- including Wildlife Populations
- Level of literacy in NWT is deplorable. Why is this? How do other countries succeed? Why aren't schools more productive
- Monitor impacts of oil and gas development in communities; monitor effects on the environment of oil and gas development in the region Parenting Skills What are the prime factors contributing to the behaviours in children and how can this be improved
- Protected Areas
- Oil extraction and its processing has been occurring in our community. As a result, there has been an accumulation of waste such as old vehicles, old equipmen, and material generated for which we have no further use.
- Social impacts of oil and gas development in communities
- Surveys for archaeological/heritage sites in proposed oil and gas development areas
- Sustainable Development
- Sustainable Development
- Thresholds and indicators for cumulative effects, evaluation of biodiversity, mechanisms for protection, required representation in every ecoregion
- Tourism: Who is coming? Why? How do we increase tourism numbers?
- Visitors to the NWT
- Water Quality
- Water Resources Traditional Environmental Knowledge: Compensation issues for changes in water quality or quantity
- We feel are the topics are important
- Surveys for archaeological /heritage sites in proposed oil and gas development areas;
- Monitor effects on the environment of oil and gas development in the area; Wildlife management

Appendix B
Survey Respondent's Comments on Relationships and the Flow of Information Between Researchers and Non-Researchers

Northern Based Researchers and Research Organizations

- For the research projects described, which is being conducted for [industry groups], communities have a moderate level of involvement – [the industry group] has a multi-government monitoring board. In general terms, a lot of research is conducted through southern institutions with little northern involvement or awareness.
- In terms of community involvement, the research activity we do does not affect communities. The results are of importance and are distributed.
- In terms of communication of research results, the larger number of organizations/groups resulting from land claim settlements has increased the communication workload.
- As a co-management body, it is a bit difficult to respond to some of the questions. If we are carrying out the co-management task properly, there should be a high degree of community involvement and an efficient two-way flow of information.
- In terms of community involvement in research projects, we live in the community and do community-based work.
- Provide or make available a space in each community where researchers can put posters on the relevant ("in the area") studies going on each summer. This site would be an Aurora Research Institute poster site and would be permanent so that people could always know where to find up to date information on what, where, and who is doing things in an area.
- Community knowledge and community involvement in research varies greatly, depending on where the research originates, the purpose of the research, who is contracted to do the research, and the research methodology. For example, [research group] has conducted research with our First Nations/Inuit band councils, often with very poor results and communication. Our mental health needs assessment was contracted to a northern person, who used the methodology of hiring local, respected facilitators to conduct the focus groups. The facilitators were brought together to have input into the questions and methodology before conducting research. Two different examples of community knowledge, ownership with respect to research.
- We don't have the budget to visit communities: very little of our work is in communities

Comments on methods of communicating research results to host communities:

- Plain Language Reports on the Internet
- PowerPoint presentations
- Radio and Newspaper

Northern based Organizations not Conducting Research

- In terms of how well informed our organization is about research activities, some are well informed (some directors and members are involved in research) and others are seldom informed (some members get information at irregular intervals)

Comments on how research reports received can be made more useful:

- [Organization] staff have very little time for research or for reading long reports. Reports need to be use friendly, easily read, and useful as a resource.
- Be more timely and relevant to current situations. More focus on specifics than generics
- Research reports that I have seen have not been on topics of interest to the municipality
- A one-page summary in a language the average person can understand
- More readable to the general public; more understandable
- Through flyers, put into individual mail-boxes.
- Only receive health related research which is NWT in general. Reports are used as a guide and to orientate new staff.
- By channelling appropriate findings to the group that can make use of the information.
- Plain-language executive summaries are helpful. It would also be useful to have a regular, comprehensive update on research underway, and when the results will be published.
- I reckon my problem with reports is that they are voluminous, inconclusive and perhaps more concerned with vague conclusions and being politically correct than with being useful
- Data that is pertinent to the users not just for baseline data purposes. We know what is out there, we just want to know why
- Information and communication to all First Nations
- TEK should be made as site-specific as possible
- Being provided opportunity for input to try to obtain more relevant data in support of Board
- If it relates to social, housing and heath issues
- Frequent distribution; User friendly; Possibly a public presentation
- Web-based access; summaries and compilations
- Help me get funding for a position who could review it all in the context of the work we do, even core funding would help

- Keep in succinct, readable format
- Reports from researchers could be made more useful to us if there were plain language Synopses, a clear application of the information to impact assessment, and the provision
- Be made available in an easy to read and understood format, with clear and concise clear messages
- Should be public knowledge
- Information can be made more pertinent for the average user.
- Poster displays and information pamphlets are useful ways to convey information to the public. Scientific reference can be obtained for complete information.
- Have the reports more focused on the points of interest indicated in the research priorities section
- Comments on other/better methods to receive research results
- Compendium of Research
- GIS integrative systems
- Compendium of Research
- Compendium of Research
- Community Workshops

Southern-based Researchers and/or Research Organizations

- I do not send reports or information to communities after research projects have ended because I never receive any indication that they are interested. However, I expect to be proactive in the area in the future
- In terms of how well informed host agencies are about research projects, I answered 'no' [never informed] because it seems there is an ever increasing number of agencies that have to be 'informed' so I spend more and more time doing so, often not even sure if the agencies exist. It would be an excellent idea for you to set up a web site to which I can post information that this large number of agencies can go to view relevant information. This way I can compile a better report and do it once, post it and wait for responses - assuming you set up links to my e-mail address.
- In terms of community involvement in the planning of research projects, on average feedback from members suggests a moderate level of involvement
- In terms of how well informed host agencies are about research projects, it depends very much on the project and the community. Varies from well informed to seldom informed in some cases.
- In terms of sending research reports back to the communities, our members are encouraged to comply with reporting requirements, although there are obvious gaps. Data availability from members needs to be improved.
- In many respects [the situation with respect to ease of communicating the results of research projects] is better, in some respects worse.
- Community involvement in the planning of research projects – there is a moderate level of involvement in logistics
- Reports on research are sent back to host communities required
- In terms of sending information on research projects back to communities: information is communicated regularly to communities throughout duration of project, not just at the end
- In terms of community involvement in the planning of research projects, I would say our study was community-based and supported but not community driven
- In terms of how well the host community knows about research projects while they are going on: while I was in the community I felt my hosts were well informed! After I left the community, I called/faxed/emailed with updates every 3-4 months.
- In terms of community involvement in the planning of research projects, it depends very much on the researcher, the community and the topic
- In terms of how well the host community knows about research projects while they are going on: some people are informed - by law, through receiving/allowing permits. Whether they pass information on to the rest of the community is debatable
- We need good communication between researchers, students, and communities - we don't need more bureaucracy and paper load; if the permit approval process is seen as _____ and doesn't enhance communities understanding and research it will quickly lose
- Our problems with communicating the results of archaeological research are an enormous absence of community interest; we make efforts here but no one makes them there. However on non-archaeological projects like exhibits there is often considerable interest and excellent cooperation from communities
- Comments on the most effective ways to communicate research results to NWT residents:
- Compendium of research in the NWT; Copies of published papers
- Community Workshops are the most effective method but also the most costly
- Plain Language Reports to communities; Both Databases and Conferences to professionals; the Internet to communities or professionals
- Not a lot of community interest in archaeology
- Publication in scientific journal

Appendix C
Survey Respondent's comments on the role of the Aurora Research Institute

Part 1 - Non-Researchers

- [Industry group] would benefit from research and reports related to our industry or its effects on the communities. This can be large in scope to include improved academic standards, capacity building, training opportunities, socio-economic benefits, etc.
- [Organization] would like to be a participant/partner in an appropriate research project.
- As a K-12 Education agency in the NWT we would be very interested in further exploring action-research initiatives in the area of education... I would like more info. on funding opportunities, proposal writing strategies and how to carry out a quality and workload realistic study/project involving individuals or committees of our employees.
- Does the Aurora Research Institute provide any funding or logistical support to Non-profit, Non-government Organizations for research?
- I am new to the NWT so am very interested in accessing any resource information. Thanks for the opportunity to respond.
- I think that the work of the Aurora Institute is very important. I do feel however that the Institute needs to work on promoting its mandate and role within the NWT. I continue to hear concerns about the need for protocols and contracts with researchers and little knowledge about the current approval process from representatives of aboriginal organizations. One such meeting occurred in Inuvik and the institute had not been invited to attend.
- Our organization would like more plain language summaries of research results in the future
- How can we work more cooperatively to ensure research results from environmental assessment and compliance monitoring are at high standards and available for public use?
- Will ARI take any research action as a result of this Questionnaire? This Questionnaire could be considered self-serving, why can't ARI find out what are the most costly problems and failures of our society and then research solutions? What is your mission and is ARI worth public funding?
- Would like more information on federal funding availability by application.
- I see potential for ARI to provide a lead role in coordination of research and findings to reduce duplication/redundancies; guide researchers in consultation with communities, improve opportunities for community based research and monitoring programs

Part 2 - Researchers

- ARI has been a fundamental source of support for [organization] research throughout the Institute's existence.
- As a senior administrator it would help me to get to know senior research persons in the NWT, to enable personal communication about issues, priorities, strategies to advance research initiatives, partnership building, etc.
- Greater emphasis should be placed on facilitating and supporting scientific research and getting local people involved in certain projects.
- I have been helped, a very great amount, by the institute and it's predecessor [Research Lab] every year since 1963. The help provided has been very greatly appreciated. Were it not for the 'Lab' I could not have maintained a long-term field program.
- I think the research institute is a unique and important tool to monitor and coordinate northern research. One additional capacity could be the establishment of an ethics review board that could assess research proposals from a northern perspective, instead of relying on southern universities for this process
- I would like the NWT to develop a stronger research agenda, and I believe Mental Health could benefit from more northern research.
- In our experience, communities seem ill informed about the activities of the ARI and its more of a hurdle to get the permit than it is to involve a community with research planning, executing and reporting. However, the ARI does a very good job with the compendium to share info on what projects are out there.
- In the past, I have worked extensively in the NWT, and it would be fair to say that my research would have been impossible without the many forms of logistical and administrative assistance which the Aurora Research Institute supplied.
- Provide or make available a space in each community where researchers can put posters on the relevant ("in the area") studies going on each summer. This site would be an ARI poster site and would be permanent so that people could always know where to find up to date info. On what, where, and who is doing things in an area
- The Aurora Research Institute is a critical link for our scientists
- The Institute provides excellent logistic and scientific support for our research. The research summaries are most useful as to who's doing what in the NWT.
- The Institute's support for researchers is invaluable and I hope will continue to expand. The role of aiding researchers to hire local students as field assistants is essential. Support for student salaries is critical and should be expanded. The Institute should consider involving researchers in teaching - perhaps lectures, presentations, etc.
- The Inuvik Research Centre - it's facilities and technical staff - are critical for effective fieldwork in the western arctic. If the centre is allowed to collapse and is not integrated somehow within the new Aurora College, research in the region will stop
- Without [ARI staff member] and excellent logistical support my projects would be very difficult to carry out.